



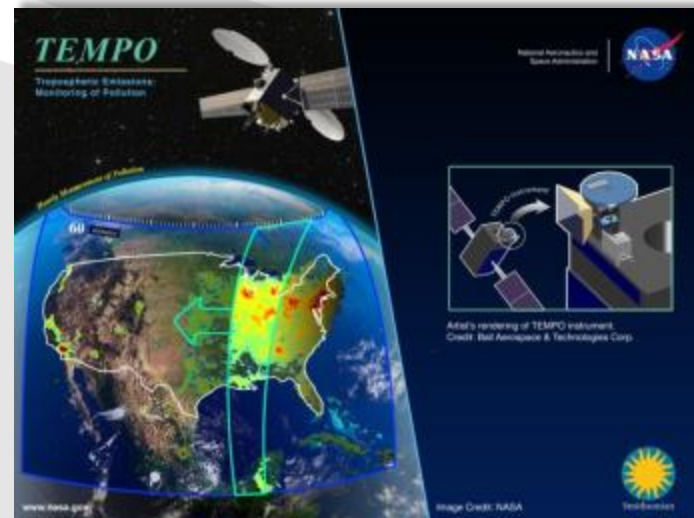
Tropospheric Emissions: Monitoring of Pollution (TEMPO)



Project Approach

- Responds to an NRC Decadal Study element of GEO-CAPE
- Examines Tropospheric air-pollution from space
- Measurements built on heritage from 5 spectrometers flown in LEO, operational algorithms
- TEMPO is an imaging grating spectrometer targeted for hosting on GEO satellite nadir deck for viewing GNA
- Low resource requirements, ensuring flexibility

- Principal Investigator: Kelly Chance (SAO)
- Project Manager: Steve Hall (LaRC)
- ESSP Program Director: Greg Stover
- Mission Manager: Brooke Thornton
- Program Scientist: Barry Lefer



Primary Science Objectives:

- Collect simultaneous high temporal and spatial resolution measurements of pollutants over Greater North America (GNA)
- Measure the key elements in tropospheric ozone chemistry and aerosol cycles
- Observe aerosols and gases for quantifying and tracking evolution of pollution
- Integrate observations from TEMPO and other platforms in models to improve representation of processes
- Determine the diurnal instantaneous radiative forcings associated with pollutants and other climate agents on the continental scale.